



National Weather Service

Storm Data and Unusual Weather Phenomena



October 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

IOWA, Central

Palo Alto County									
2 E Cylinder	04	1435CST			0	0	2K	5K	Hail(0.88)
Palo Alto County									
5 NE Cylinder	04	1439CST			0	0	5K	30K	Hail(1.75)
Kossuth County									
4 N Whittemore	04	1445CST			0	0	2K	5K	Hail(0.88)
Emmet County									
3 E Gruver	04	1526CST			0	0	5K	20K	Hail(1.00)
Winnebago County									
2 SSW Rake	04	1555CST			0	0	3K	5K	Hail(1.00)
Palo Alto County									
Ruthven	04	1905CST			0	0	15K		Thunderstorm Wind (EG52)

An unusual weather pattern for October was in place across the central U.S. A strong trough of low pressure in the upper atmosphere was in place over the western U.S. with a strong Bermuda Ridge in place over the southeast U.S. The broad southwest flow aloft helped establish a strong tropical tap as the moisture from Hurricane Otis was drawn north into the region. The airmass was more typical of July instead of October. High temperatures warmed to the mid 80s to low 90s across Iowa, with dew points in the upper 60s to low 70s. A cold front extended from northwest Wisconsin, into a low pressure over northwest Iowa, then southwest into another low in eastern Colorado. As the first low lifted northeast, severe thunderstorms developed in the vicinity of the frontal boundary. Plenty of CAPE was available with values in the 2000 to 2500 J/kg range. The lifted index was -6 by the late afternoon hours. The thunderstorms became severe and produced hail and high winds. The largest hail fell in Palo Alto County northeast of Cylinder. Golf ball size hail completely covered the ground. As one farmer put it, he is now done combining for the season. The crops in that area were totally wiped out. There were numerous reports of hail around one inch in diameter. As the storms matured and the low lifted northeast, a section of the line south of the low took on a bow echo configuration. This bow echo swept into Palo Alto County with Ruthven reporting 60 MPH winds. A stop sign was blown down in Ruthven and a trailer was blown across the road.